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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/960,691	09/21/2001	Dan Nobbe	CS10951	5227

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EXAMINER

NGUYEN, LEE

ART UNIT PAPER NUMBER

2682

DATE MAILED: 12/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/960,691

Applicant(s)

NOBBE ET AL.

Examiner

LEE NGUYEN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This action is responsive to the communication filed 09/30/2005.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 6-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Kazuhiko et al. (JP Publication No. 2000-244342).

Regarding claim 1, Kazuhiko teaches an apparatus for directing a radio frequency (RF) transmit (Tx) signal within a specific Tx band (889-960 MHz, see [0014]-[0015] and [0018], a frequency band is divided into two transmit frequency bands) to a separate path, (fig. 1), comprising: a switch 107, a first bandpass filter 108 having a first passband 889-898 MHz within the specific TX band 889-960MHz (see [0014])coupled to the switch 107 to receive a switched Tx signal 104 and produce a first filtered Tx signal 110., and a second bandpass filter 109 having a second passband 925-960 MHz within the specific Tx band 889-960 MHz (see [0015]) coupled to the switch 107 to receive the switched Tx signal 1 10 and produce a second filtered Tx signal 1 12,

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wherein the switch 107 connects to one of the first and second filters 108, 109 based upon a channel assignment of the Tx signal within the specific Tx band, see [0016].

Regarding claim 2, Kazuhiko also teaches that the first filter 108 has a first passband 889-898 MHZ within the Tx band and inherently provides higher insertion loss outside of the first passband than inside of the first passband, see MPEP 2114.

Regarding claim 3, Kazuhiko further teaches that the second filter 109 has a second passband 925-960 MHZ different from the first passband within the Tx band and inherently provides higher insertion loss outside of the second passband than inside of the second passband, see MPEP 2114.

Regarding claim 4, Kazuhiko also teaches that the first passband and the second passband, both being within the Tx band, have no common frequency range (see the rejection of claims 2-3).

Regarding claim 6, Kazuhiko further teaches a modulator 103 (fig. 1) coupled to the switch 107, producing the Tx signal having a Tx signal frequency substantially equal to a desired RF Tx frequency, see [0016].

Regarding claim 7, Kazuhiko also teaches a second switch 113 coupled to

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the first and the second filters 108, 109 (fig.1) wherein the second switch 113 is connected to one of the first and the second filters 108, 109 based upon the channel assignment within the specific Tx band, and produce a second switched Tx signal 112, see [0016].

Regarding claim 8, Kazuhiko also teaches a power amplifier (PA) 115 (fig. 1) coupled to the second switch 113 to receive the second switched Tx signal 112 and produce an amplified Tx signal for transmission at a PA output 119.

Regarding claim 9, Kazuhiko teaches an apparatus for generating a radio frequency (RF) transmit (Tx) signal having reduced noise by directing a RF Tx signal within a specific Tx band to a separate path (fig. 1), comprising: a modulator 103 producing the Tx signal having a Tx signal frequency substantially equal to a desired RF Tx frequency', a first switch 107 coupled to the modulator to receive the Tx signal 104., a first filter 108 coupled to the first switch 107 to receive a first switched Tx signal 104 and produce a first filtered Tx signal 110, having a first passband 889-898 MHZ within the Tx band and inherently provides higher insertion loss outside of the first passband than inside of the first passband, see MPEP 2114., a second filter 109 coupled to the first switch 107 to receive the first switched Tx signal 104 and produce a second filtered Tx signal 111, having a second

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passband 925-960 MHZ different from the first passband within the Tx band and inherently provides higher insertion loss outside of the second passband than inside of the second passband, see MPEP 2114, a second switch 113 coupled to the first and second filters 108, 109 to receive the first and the second filtered Tx signal, respectively, producing a second switched Tx signal 112, and a power amplifier (PA) 115 coupled to the second switch 113 to receive the second switched Tx signal 112 to produce an amplified Tx signal for transmission at a PA output 119', wherein the first and the second switches connect to one of the first and the second filters based upon a channel assignment of the Tx signal within the specific Tx band, see (0016).

Regarding claim 10, Kazuhiko teaches a method for generating a radio frequency (RF) transmit (Tx) signal having reduced noise by directing a RF Tx signal within a specific Tx band to a separate path comprising steps of: determining an appropriate path 108 or 109 (fig. 1), which is one of a plurality of paths each having a bandpass filter 108, 109, for the Tx signal based upon a channel assignment of the Tx signal, see (0016J); establishing the appropriate path for the Tx signal 108 or 109., and sending the Tx signal through the appropriate path 108 or 109.

Regarding claim 11, the claim is interpreted and rejected for the same reason as set forth in claim 4.

Regarding claim 12, Kazuhiko also teaches that the appropriate path has the bandpass filter 108 or 109 having the passband encompassing the channel assigned to the Tx signal, see (0016).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kazuhiko in view of Phillip et al. (US 5,867,535).

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Regarding claim 5, Kazuhiko fails to teach that the first passband and the second passband, both being within the Tx band, overlap. According to Phillip, the passbands of two filters in a transmitter can be overlapped (col. 19, 59-62). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the overlapping bands of Phillip to the transmit bands of Kazuhiko in order to have more bandwidth for the system.

Response to Arguments

Applicant's arguments filed 09/30/2005 have been fully considered but they are not persuasive.

In the remarks, Applicant contends that the frequency band of Kazuhiko is divided with two or more transmit-frequency bands, while the claimed invention have pass band frequencies that are specifically within a specific transmit frequency band.

In response, the claimed specific transmit frequency band can read on Kazuhiko's frequency band range between 889-960 MHz as stated in paragraph [0018] and [0014] –[0015]. This specific frequency band 889-960 MHz is divided into two frequency bands (see [0018]) using the first bandpass filter 108 for the first frequency band 889-898 MHz (see [0014]) and the second bandpass filter 109 for the second frequency band 925-960 MHz (see [0015]).

This demonstration also applies to the limitation of independent claim 9 and dependent claim 5.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LEE NGUYEN whose telephone number is 571-272-7854. The examiner can normally be reached on FIRST FRIDAY OFF.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, DORIS TO can be reached on (571) 272-7629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


LEE NGUYEN
PRIMARY EXAMINER 11/30/05